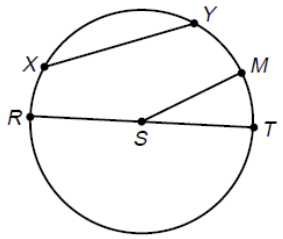
Refer to ⊙S for Exercises 1–6.



1. Name the center of ⊙S. S

2. Name three radii of ⊙S. $\overline{ST}$, $\overline{SM}$, $\overline{SR}$

3. Name a diameter. $\overline{RT}$

4. Name a chord. $\overline{XY}$

5. If $RT = 8.2$, find SM. 4.1

6. Is $\overline{SR} \cong \overline{SM}$? Explain.

both are radii

In Exercises 7–10, the radius, diameter, or circumference of a circle is given. Find the other measures to the nearest tenth.

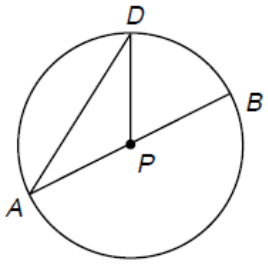
7. $r = 7$, $d =$? 14, $C =$? 44.0

8. $d = 32.4$, $r =$? 16.2, $C =$? 101.7

9. $C = 116.5$, $d =$? 37.1, $r =$? 18.6

10. $r = 12$, $d =$? 24, $C =$? 75.3

Refer to the figure at the right.



1. Name the center of $\odot P$. P

2. Name the three radii of the circle.
$\overline{PB}, \overline{PA}, \overline{PD}$

3. Name a diameter.
$\overline{AB}$

4. Name two chords.
$\overline{DA}, \overline{AB}$

Find the circumference of a circle with a radius of the given length. Round your answers to the nearest tenth.

5. 3 cm
18.8

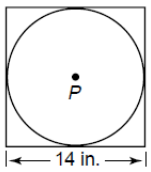
6. 2 ft
12.6

7. 34 mm
213.6

8. 4.5 m
28.3

Find the exact circumference of each circle.

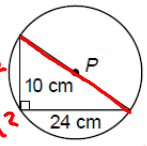
9.



$d = 14$

$C = 14\pi$

10.

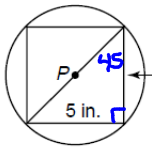


$10^2 + 24^2 = d^2$

$676 = d^2$

$26 = d$ $C = 26\pi$

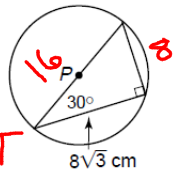
11.



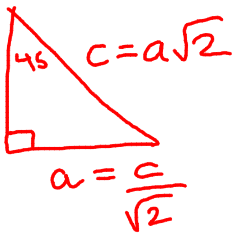
$d = 5\sqrt{2}$

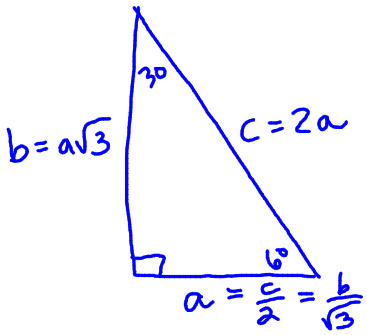
$C = 5\sqrt{2}\pi$

12.



$C = 16\pi$

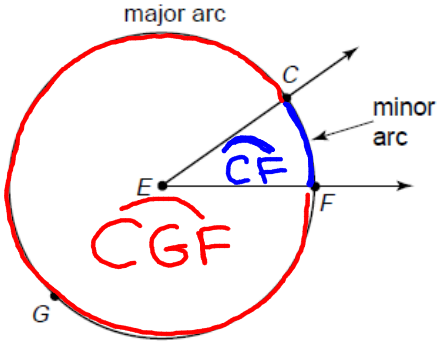




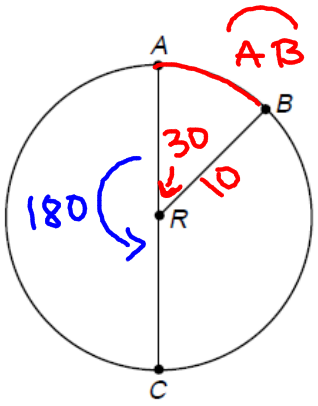
More about circles

An angle whose vertex is at the center of a circle is called a **central angle**.

A central angle separates a circle into two arcs called a **major arc** and a **minor arc**.



The arcs determined by a diameter are called semicircles and have measures of 180.



The length of an arc =

C * (degrees/360)

$C = 20\pi$

$\overset{\frown}{AB} = \frac{20\pi}{1} \cdot \frac{30}{360} = \frac{20\pi}{12} = \frac{5\pi}{3}$

Measures versus Lengths

measure refers to degrees $m\overset{\frown}{AB}$

length refers to centimeters, inches, etc. distance